BD|SENSORS
pressure measurement

LMK 807

Plastic Probe for Aggressive Media

Ceramic Sensor

accuracy according to
IEC 60770: 0.5 % FSO

Nominal pressure

from 0 ... 4 mH_2O up to 0 ... 100 mH_2O

Output signals

2-wire: 4 ... 20 mA
others on request

Special characteristics

- diameter 35 mm
- excellent long term stability
- easy handling

Optional versions

- SIL 2 (Safety Integrity Level) according to IEC 61508 / IEC 61511
- different kinds of cables and elastomers
- customer specific version e. g. special pressure ranges

The plastic submersible probe LMK 807 is designed for continous level measurement for waste water or and different aggressive media.

Basic element of the plastic submersible probe is the flush mounted ceramic sensor, which makes cleaning easier when solid parts of the medium deposit on it. Different cable and elastomer materials are available in order to achieve maximum media compatibility.

Preferred areas of use are

Sewage
waste water treatment
water recycling
dumpsite

Aggressive media
level measurement in most of acids and lyes

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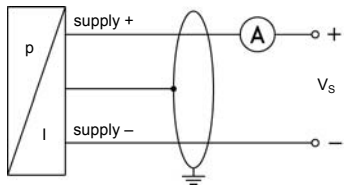
Input pressure range									
Nominal pressure gauge	[bar]	0.4	0.6	1	1.6	2.5	4	6	10
Level	[mH_2O]	4	6	10	16	25	40	60	100
Overpressure	[bar]	1	2	2	4	4	10	10	20
Burst pressure ≥	[bar]	2	4	4	5	5	12	12	25

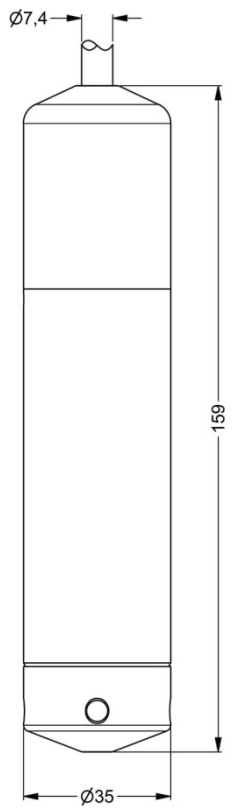
Output signal / Supply	
Standard	2-wire: 4 ... 20 mA / V_S = 8 ... 32 V_{DC} SIL-version: V_S = 14 … 28 V_{DC}
Performance	
Accuracy [1]	≤ ± 0.5 % FSO
Permissible load	R_{max} = [(V_S – $V_{S\,min}$) / 0.02 A] Ω
Influence effects	supply: 0.05 % FSO / 10 V load: 0.05 % FSO / kΩ
Long term stability	≤ ± 0.1 % FSO / year at reference conditions
Response time	< 10 msec
[1] accuracy according to IEC 60770 – limit point adjustment (non-linearity, hysteresis, repeatability)	
Thermal effects (Offset and Span)	
Thermal error	≤ ± 0.2 % FSO / 10 K in compensated range -25 ... 70 °C
Permissible temperatures	
Permissible temperatures	medium: 0 ... 50 °C storage: -10 ... 50 °C
Electrical protection [2]	
Short-circuit protection	permanent
Reverse polarity protection	no damage, but also no function
Electromagnetic compatibility	emission and immunity according to EN 61326
[2] additional external overvoltage protection unit in terminal box KL 1 or KL 2 with atmospheric pressure reference available on request	
Electrical connection	
Cable with sheath material [3]	PVC (0 … 50 °C) grey PUR (0 … 50 °C) black FEP[4] (0 … 50 °C) black
[3] cable with integrated air tube for atmospheric pressure reference *[4] do not use freely suspended probes with an FEP cable if effects due to highly charging processes are expected*	
Materials (media wetted)	
Housing	PVC grey
Seals	FKM / EPDM / FFKM
Diaphragm	ceramics Al_2O_3 96 %
Miscellaneous	
Option SIL 2 application	according to IEC 61508 / IEC 61511
Connecting cables (by factory)	cable capacitance: signal line/shield also signal line/signal line: 160 pF/m cable inductance: signal line/shield also signal line/signal line: 1µH/m
Current consumption	max. 25 mA
Weight	approx. 200 g (without cable)
Ingress protection	IP 68
CE-conformity	EMC Directive: 2014/30/EU
Wiring diagram	

2-wire-system (current)

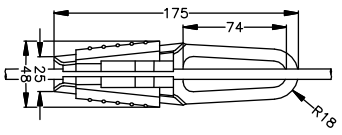


Pin configuration	
Electrical connection	cable colours (IEC 60757)
Supply + Supply –	wh (white) bn (brown)
Shield	gnye (green-yellow)

Dimensions (in mm)



Accessories

Terminal clamp		
Technical Data		
Suitable for	all probes with cable ∅ 5.5 ... 10.5 mm	
Material	standard: steel, zinc plated optionally: stainless steel 1.4301 (304)	
Weight	approx. 160 g	
Ordering type		**Ordering code**
Terminal clamp, of steel, zinc plated		Z100528
Terminal clamp, of stainless steel 1.4301 (304)		Z100527

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Ordering code LMK 807

LMK 807 ☐☐☐-☐☐☐☐-☐-☐-☐-☐-☐-☐-☐☐☐-☐☐☐

Pressure										
in bar	3 9 0									
in mH_2O	3 9 1									
Input [mH_2O] [bar]										
4.0 0.40		4 0 0 0								
6.0 0.60		6 0 0 0								
10 1.0		1 0 0 1								
16 1.6		1 6 0 1								
25 2.5		2 5 0 1								
40 4.0		4 0 0 1								
60 6.0		6 0 0 1								
100 10		1 0 0 2								
customer		9 9 9 9								consult
Housing										
PVC			A							
customer			9							consult
Diaphragm										
Ceramics Al_2O_3 96%				2						
customer				9						consult
Output										
4 … 20 mA / 2-wire					1					
SIL2 4 … 20 mA / 2-wire					1S					
customer					9					consult
Seals										
FKM						1				
EPDM						3				
FFKM						7				
customer						9				consult
Accuracy										
0.5 %							5			
customer							9			consult
Electrical connection										
PVC-cable [1]								1		
PUR-cable [1]								2		
FEP-cable [1]								3		
customer								9		consult
Cable length										
in m									9 9 9	
Special version										
standard									0 0 0	
customer									9 9 9	consult

[1] cable with integrated air tube for atmospheric pressure reference

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This price list contains product specification; properties are not guaranteed. Detailed information about options are defined in the datasheet. Subject to change without notice.

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